Substitute Abstract

ABSTRACT

In a work conveying system including at least a work holder for holding a work and a horizontal mover for moving the work holder horizontally in an upper ceiling space within a clean room, the work being conveyed to each of plural processing apparatuses. The horizontal mover has at least one linear moving mechanism including a duct with an internal guide, a traveling body engaging the guide and traveling through the traveling path defined by the duct, and a slider connected to the traveling body for travel with the traveling body on the exterior of the traveling path. The work holder is attached to the slider. Air cleaners are disposed at suitable intervals in the traveling path to clean the air therein and to discharge the cleaned air to the exterior. The traveling path accommodates a drive source, a drive mechanism, and a power supply.

ABSTRACT

A work conveying system and a traveling path sealing structure in the work conveying system are disclosed which can effectively prevent the leakage of dust into a clean room which dust is generated from a drive portion and a slide portion in a traveling path of the work conveying system using guide rails. In a work conveying system including at least a work holding means for holding a work and a horizontal moving means for moving the work holding means horizontally in an upper ceiling space within a clean room, the work being conveyed to each of plural processing apparatuses while circulating among the processing apparatuses, the horizontal moving means has at least one linear moving mechanism, the linear moving mechanism comprising a traveling path covered with a duct and having a guide portion in the interior thereof, a traveling body adapted to engage the guide portion and travel through an interior space of the traveling path, and a slider connected to the traveling body and adapted to travel together with the traveling body in the exterior of the traveling path, the work holding means or another linear moving mechanism being attached to the slider, and cleaning means are disposed at suitable intervals in the traveling path to clean the air present within the traveling path and

to
discharge the cleaned air to the exterior. In the interior of the traveling path are accommodated a drive source, a drive mechanism, and a power supply means, which are for the traveling body, at least the drive source being integral with the traveling body.

A deformable sealing means may be provided in an elongated gap portion in which a connecting member for connecting the slider to the traveling body extends through the duct, the sealing means covering the elongated gap portion without obstructing the travel of the connecting member.